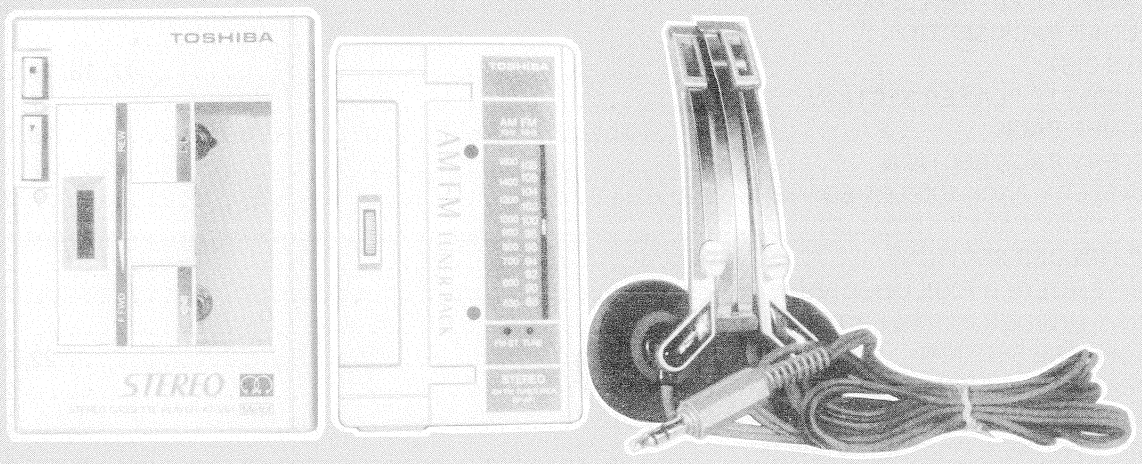
SERVICE DATA
FILE NO. 100 - 163

TOSHIBA

STEREO CASSETTE PLAYER

KT-VS1 (RP-AF1)



For Parts replacement in Tuner Pack, model RP-AF1, which is optional for KT-VS1 of "FY" version, refer to pages 19 to page 20 in this Service Data.

SPECIFICATIONS

■ Tape Section

Track system:	Stereophonic
Recommended tape:	Normal ferric, chrome dioxide, and metal alloy: C-30 to C-120
Tape speed:	4.8 cm/sec.
Frequency response:	Reproduction: 40-14 kHz
Output terminals:	3.5 mm dia. stereo head-phone jack x 2
Maximum output power:	Integration 40 mW (20 mW + 20 mW) with 32 ohm load
Battery life:	Approx. 5 hours for tape playback at 1 mW output. Approx. 24 hours for radio operation.
Power supply:	3V DC (SUM-3 "AA" x 2) External power source supplied to the [DC IN 3V] jack (3.4 mm dia. center contact negative)
Dimensions:	79(W) x 108(W) x 29(D)mm
Weight:	265 g (including batteries but not the tuner pack.)

■ Tuner Section

Receiving frequency:	FM: 88 MHz to 108 MHz AM: 525 kHz to 1605 kHz

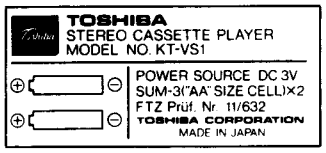
- This FM/AM tuner peck (RP-AF1) is designed exclusively for this unit (KT-VS1), and is not usable in other types of cassette recorders.

Specifications are subject ot change without notice.

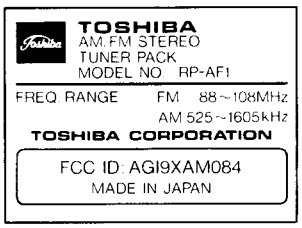
TA, TC, AY, YY, FY

CONTENTS

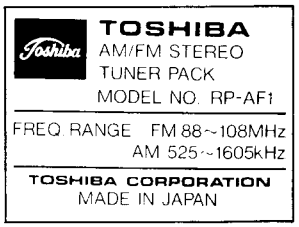
Name Label (KT-VS1)



Name Label (RP-AF1)
(TA, TC)



Name Label (RP-AF1)
(YY, AY)



1. OPERATING CONTROLS

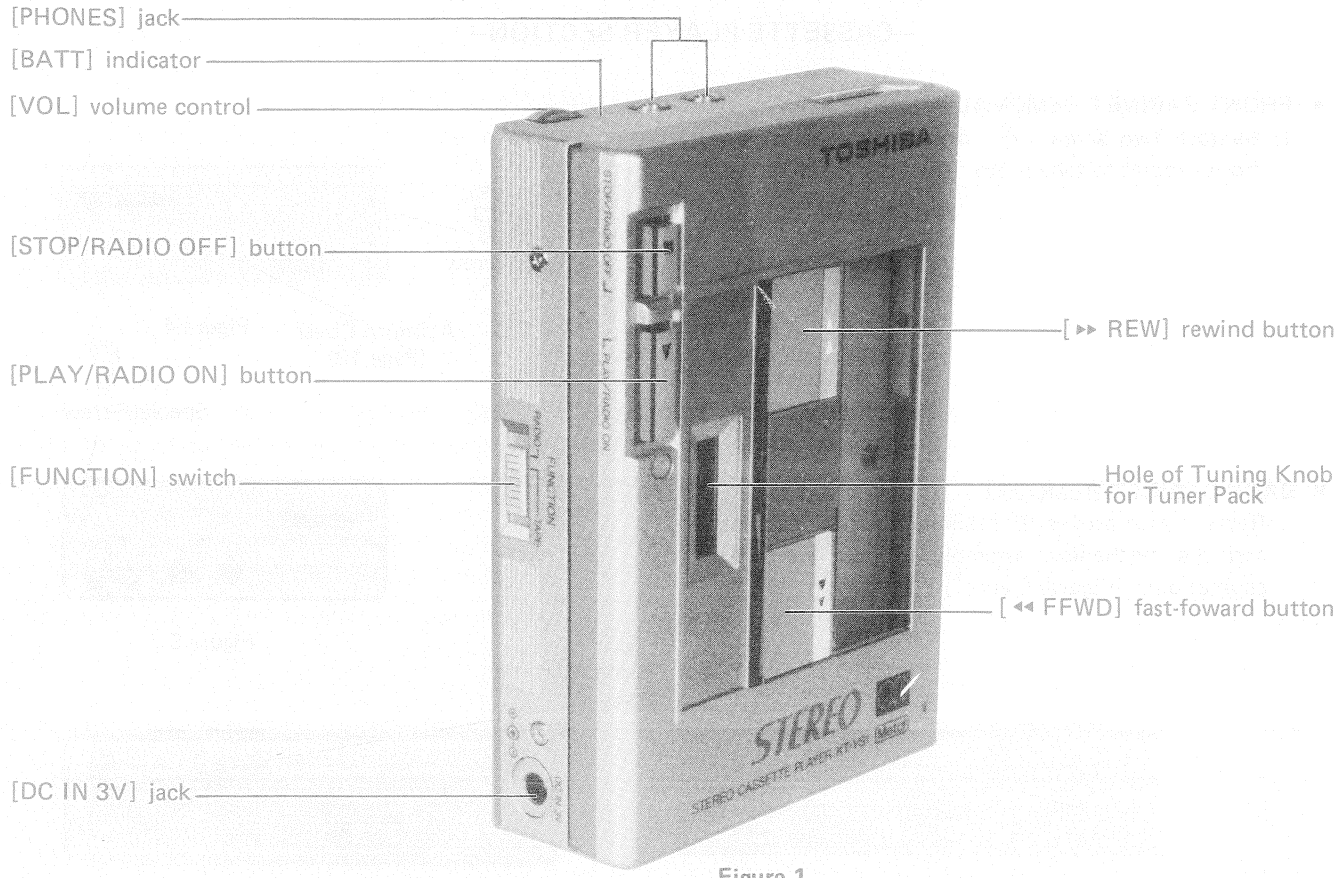


Figure 1

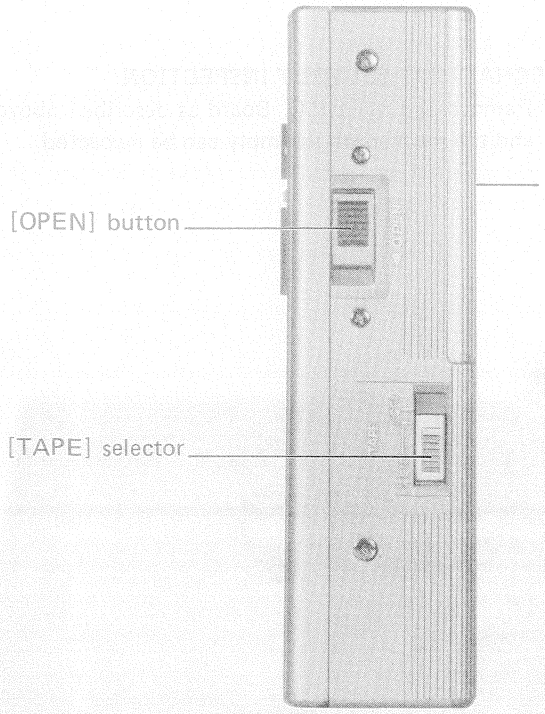


Figure 2

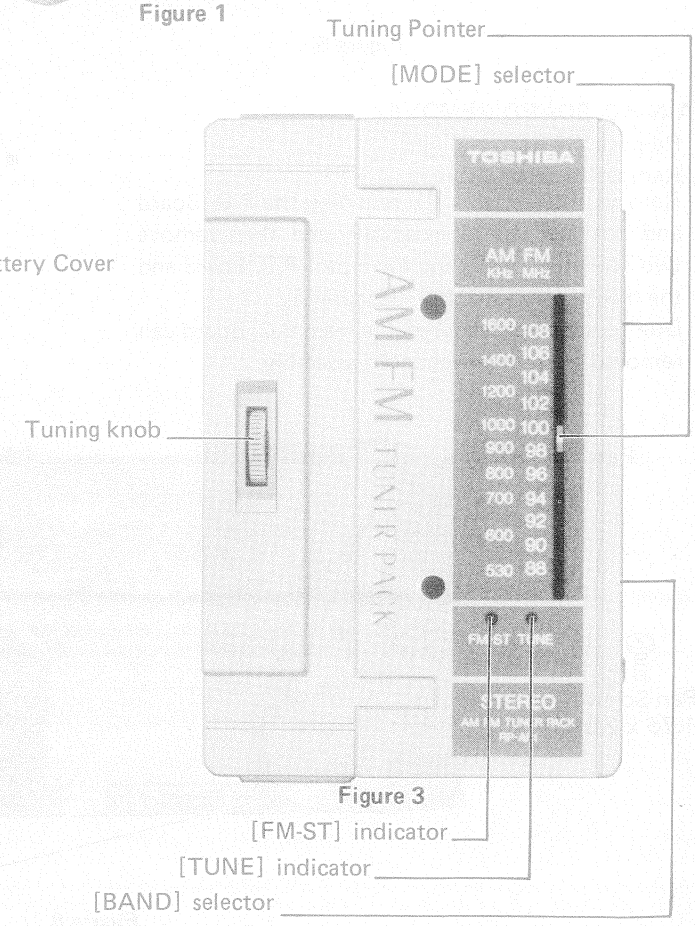


Figure 3

2. DISASSEMBLY INSTRUCTIONS

—CASSETTE PLAYER SECTION—

■ FRONT CABINET REMOVAL

1. Remove two screw Ⓐ from both sides of the front cabinet to take it out. (Figures 4 and 5)

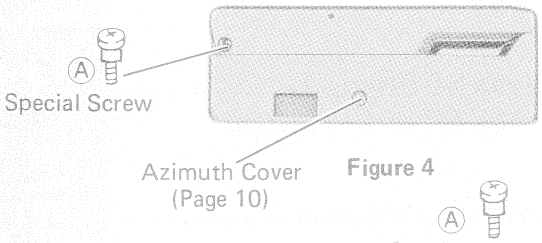


Figure 4

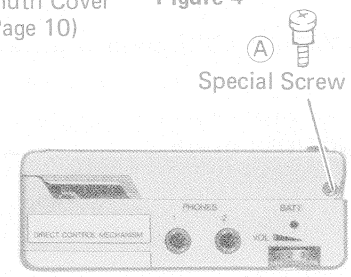


Figure 5

■ BACK CABINET REMOVAL

1. Remove four screws Ⓑ retaining the back cabinet and the mechanism assembly to take the back cabinet out. (Figures 6 and 7)

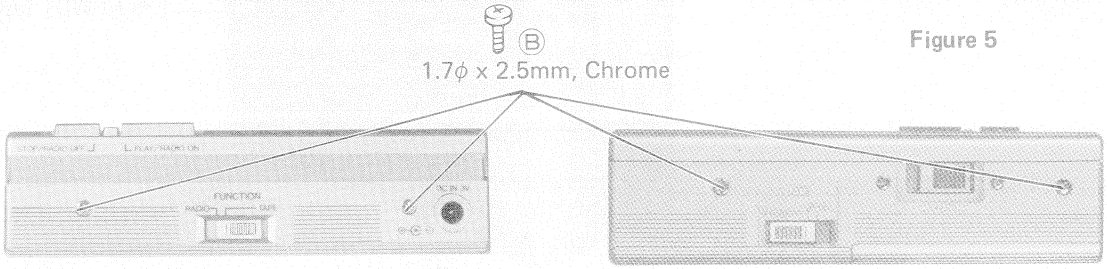


Figure 6

Figure 7

■ MAIN P.C. BOARD REMOVAL

1. Remove the front cabinet.
2. Remove the back cabinet.
3. Remove three screws Ⓒ retaining the P.C. Board and the mechanism assembly, and then remove two screws Ⓓ retaining the motor P.C. Board and the mechanism assembly, (Figure 8)
4. Due to above procedures, the main P.C. Board can removed from the mechanism assembly.

■ MECHANISM ASSEMBLY INSPECTION

1. Remove the main P.C. Board as described above, and the mechanism assembly can be inspected.

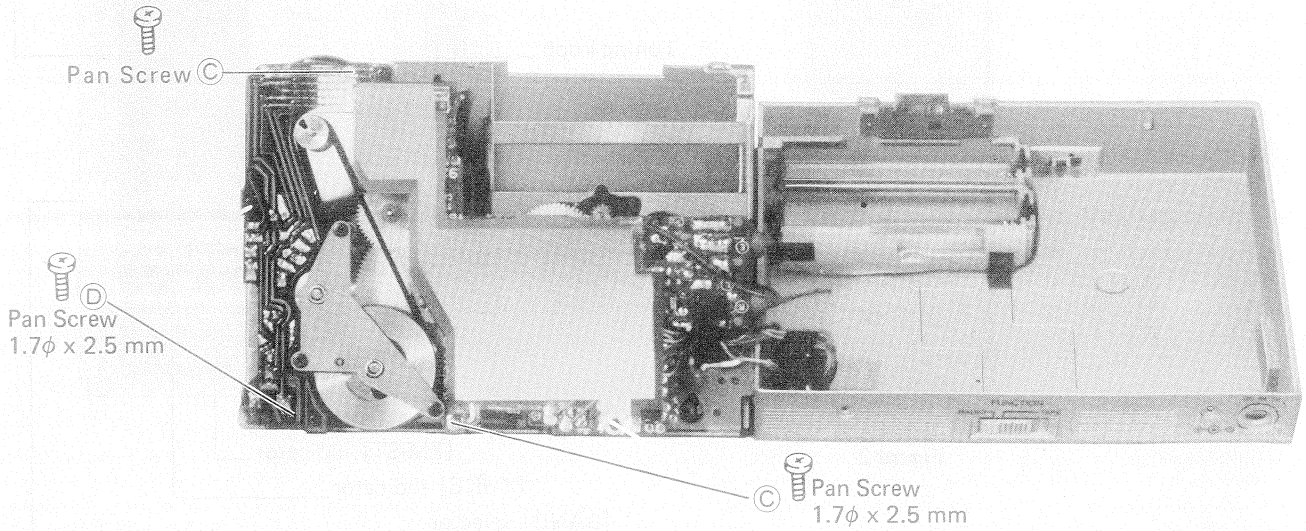


Figure 8

–TUNE PACK SECTION–

■ **UPPER CABINET REMOVAL**

1. Remove three screws Ⓔ from the bottom cabinet to take the upper cabinet out. (Figure 9)

■ **P.C. BOARD OPENING**

1. Remove the upper cabinet.
2. Take up the AM antenna coil adhered on the bottom cabinet with care not to cut lead wires from the P.C. Board.
3. Due to above procedures, the P.C. Board can be opened. (Refer to "TUNER PACK INSPECTION".)

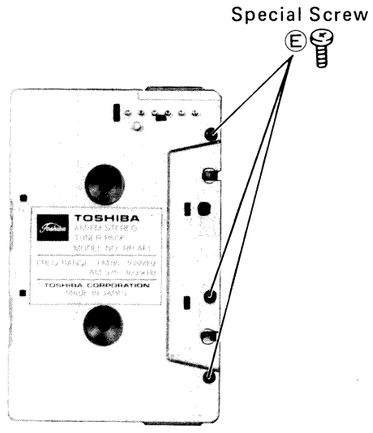


Figure 9

■ **TUNER PACK INSPECTION**

When repairing the tuner pack, inspect it according to the following procedures.

1. Remove two special screws from the front cabinet side of the cassette player and then remove the front. (Figure 10)
2. Load the tuner pack from which the upper cabinet is removed, into the cassette holder. (Figure 11)
3. Set the cassette player and the tuner in the play mode. In this case, insert a insulator packing between the cassette holder and the tuner pack in order for the connector not to detach from the cassette player. (Figure 12)
4. It is possible to inspect the rear side of the P.C. Board as shown in Figure 13.

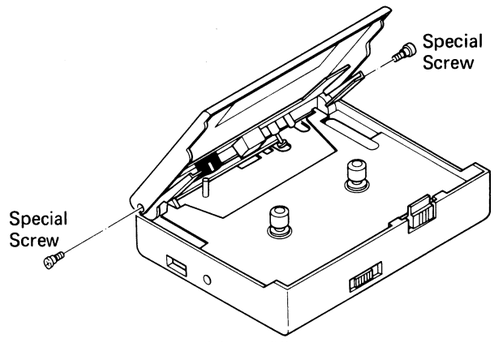


Figure 10

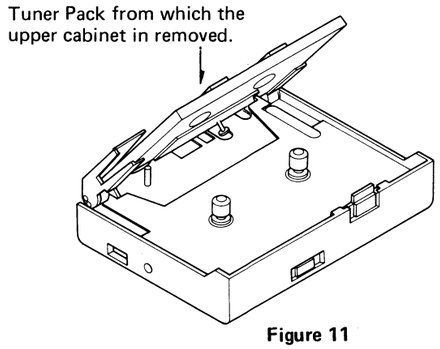


Figure 11

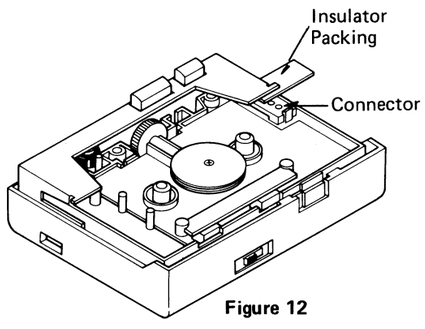


Figure 12

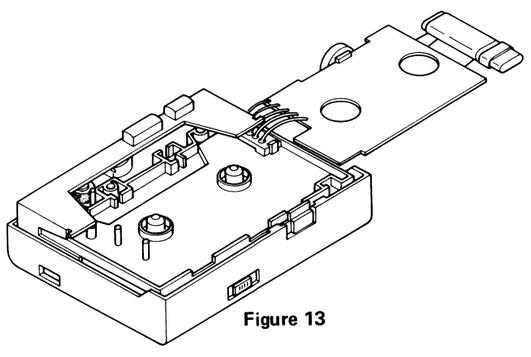


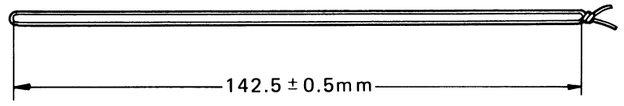
Figure 13

3. DIAL CORD RESTRINGING

■ **DIAL CORD STRINGING**

Replace the dial cord according the following procedures.

1. Turn the tuning knob counterclockwise fully (to the direction of lower frequency).
2. Wind the dial cord in numerical order.
3. Fix the dial pointer on the cord so as to fit the pointer margin to the marking line on the mould frame.



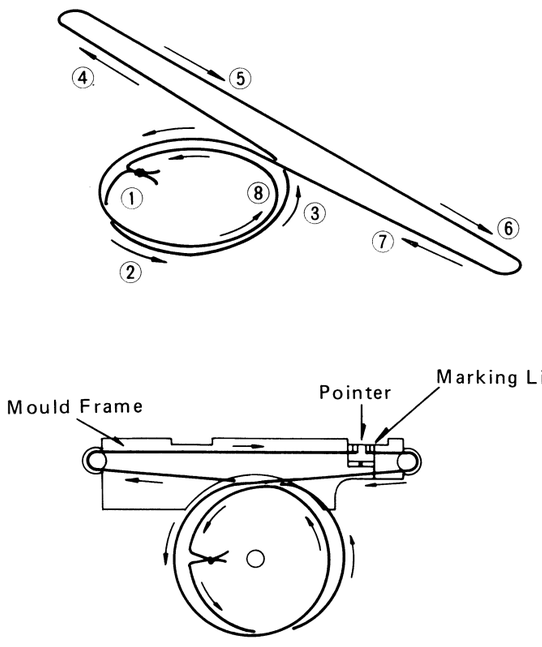
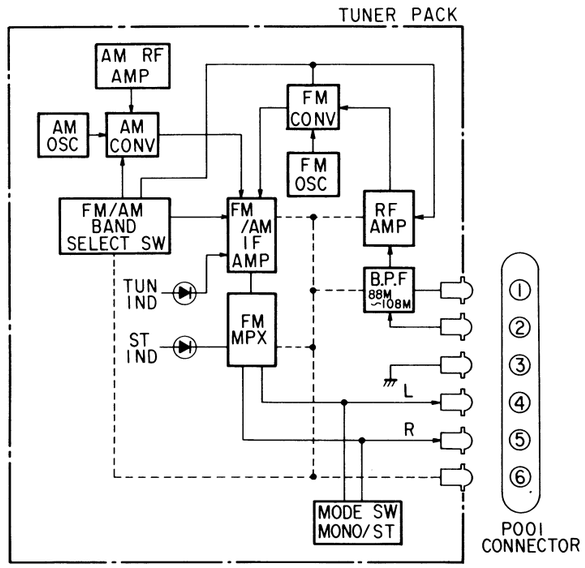


Figure 14

4. BLOCK DIAGRAM



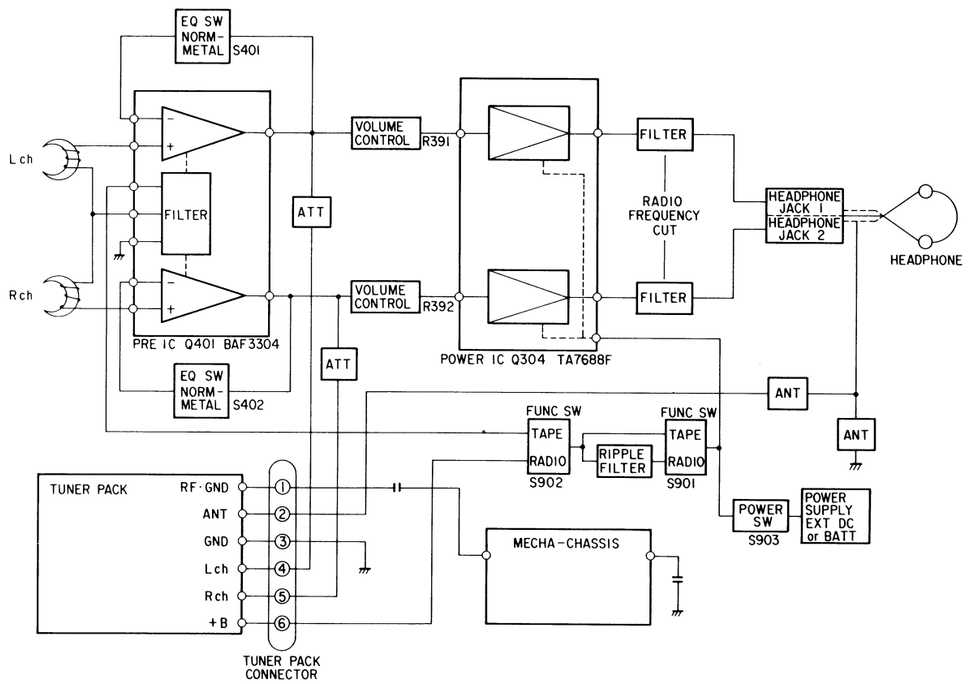


Figure 15

5. ALIGNMENT INSTRUCTIONS

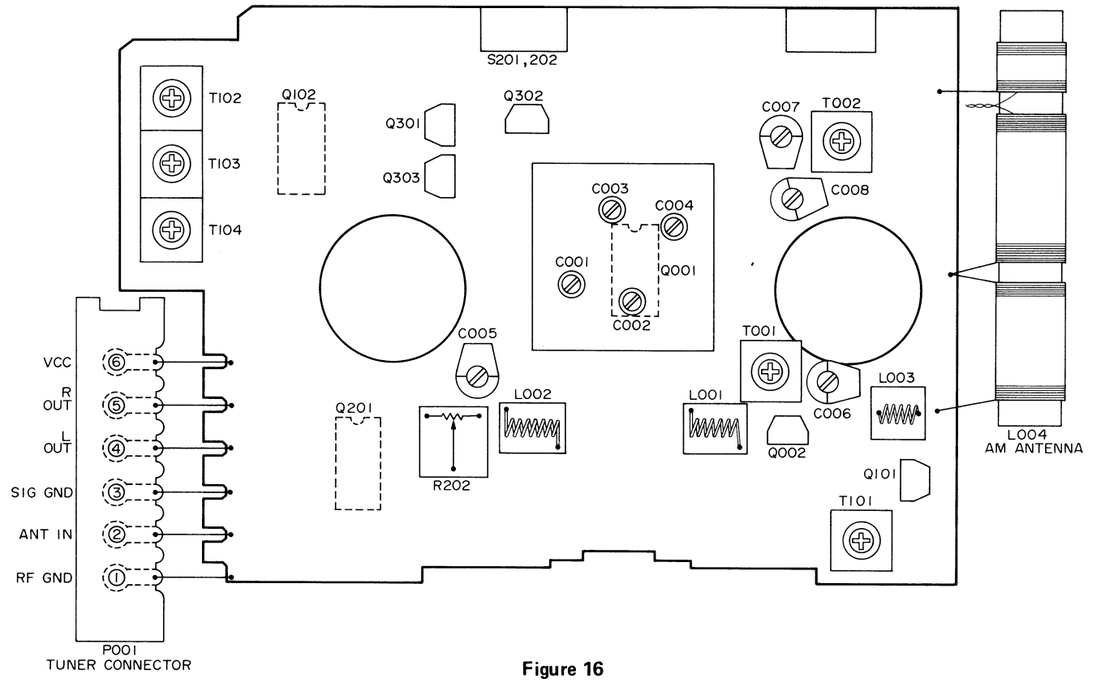


Figure 16

AM-IF ALIGNMENT

1. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded lead to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Proceed as outlined in the AM-IF ALIGNMENT CHART.

AM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a loop antenna.	Sweep generator of 455 kHz center freq. with 455 kHz marker. (YY ... 460 kHz)	Tuning Knob fully counter-clockwise (Highest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	T102 T104	Adjust coil T102 and T104 until the best single peak is obtained.

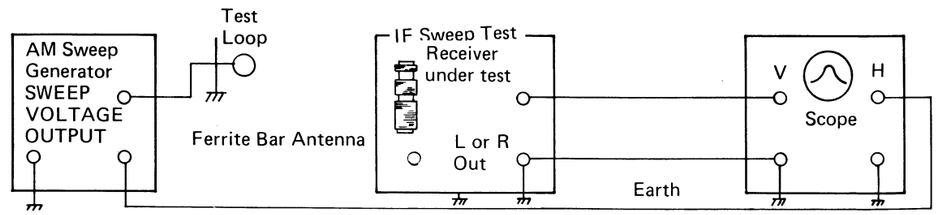


Figure 17

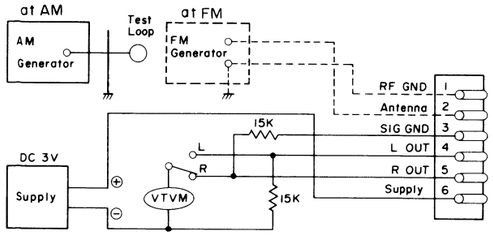


Figure 18

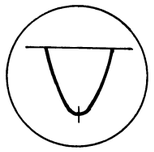


Figure 19

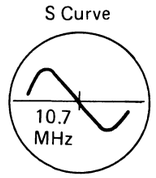


Figure 20

AM ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

AM-ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	520 kHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OCS. Coil T102	Adjust for maximum output indication
2	1650 kHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim. C007	Adjust for maximum output indication
3	Repeat steps 1 and 2 as required.			
4	600 kHz	Tune to signal	RF Coil L004	Adjust for maximum Output indication
5	1400 kHz		Ant. Trim. C008	
6	Repeat steps 4 and 5 as required.			

FM-IF ALIGNMENT

1. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded load to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Proceed as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counter-clockwise (Highest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	T101 T103	Turn the coil T103 fully counterclockwise to obtain a single peak. Fig. 19. Adjust coil T101 in order until the best single peak is obtained. Finally turn the coil T103 to obtain S Curve. Fig. 20.

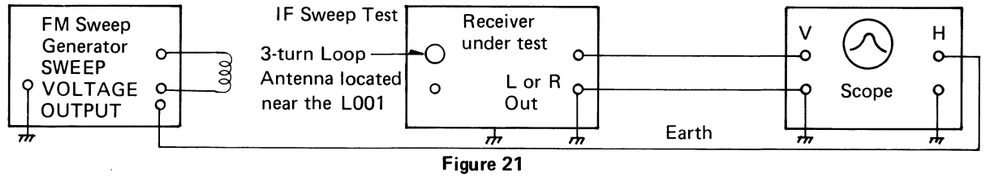


Figure 21

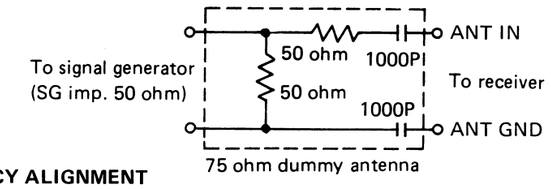
FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART

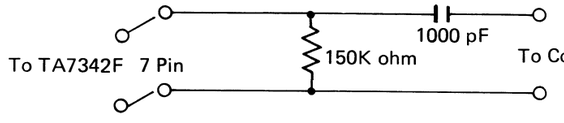
Step	Singal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.5 MHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OCS. Coil L002	Adjust for maximum output indication
2	108 MHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim. C005	Adjust for maximum output indication
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal	RF Coil L001	Adjust for maximum output indication
5	106 MHz		Ant. Trim. C006	
6	Repeat steps 4 and 5 as required.			

CAUTION: When realigning the FM Receiving Frequency, the highest end of the frequency range should not be more than 108 MHz and the lowest end of the freuqency range should not be less than 87.5 MHz, in order to comply with FTZ regulations in West Germany.



FREE RUN FREQUENCY ALIGNMENT

Adjust R202 under no signal condition so as to obtain 76 kHz ±150 Hz.



PLAYBACK HEAD ADJUSTMENT

A 6.3 kHz standard tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the EXT Speaker jack and adjust the azimuth by using a phillips screwdriver to maintain the maximum output voltage.
The adjustment is possible from the outside of the unit by removing the azimuth cover. Fig. 23

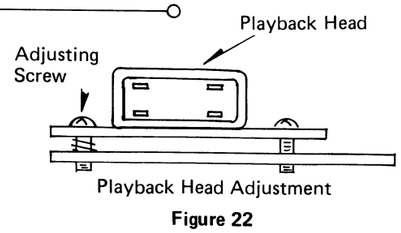


Figure 22

TAPE SPEED ALIGNMENT

Remove the azimuth cover on the left side of the unit, and the tape speed adjustment is possible from the outside. (Adjust for 3000 ±30 Hz with test tape MTT-111). Fig. 24.

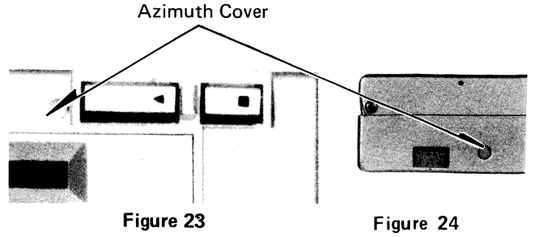


Figure 23

Figure 24

6-1. ELECTRICAL PARTS LOCATIONS

– CASSETTE PLAYER SECTION –

Q401 (BAF3304)

1	2	3	4	5	6	7	8
1.2V	—	2.5V	1.2V	0V	—	—	1.2V
9	10	11	12	13	14	15	16
1.2V	1.25V	—	—	—	—	1.25V	1.2V

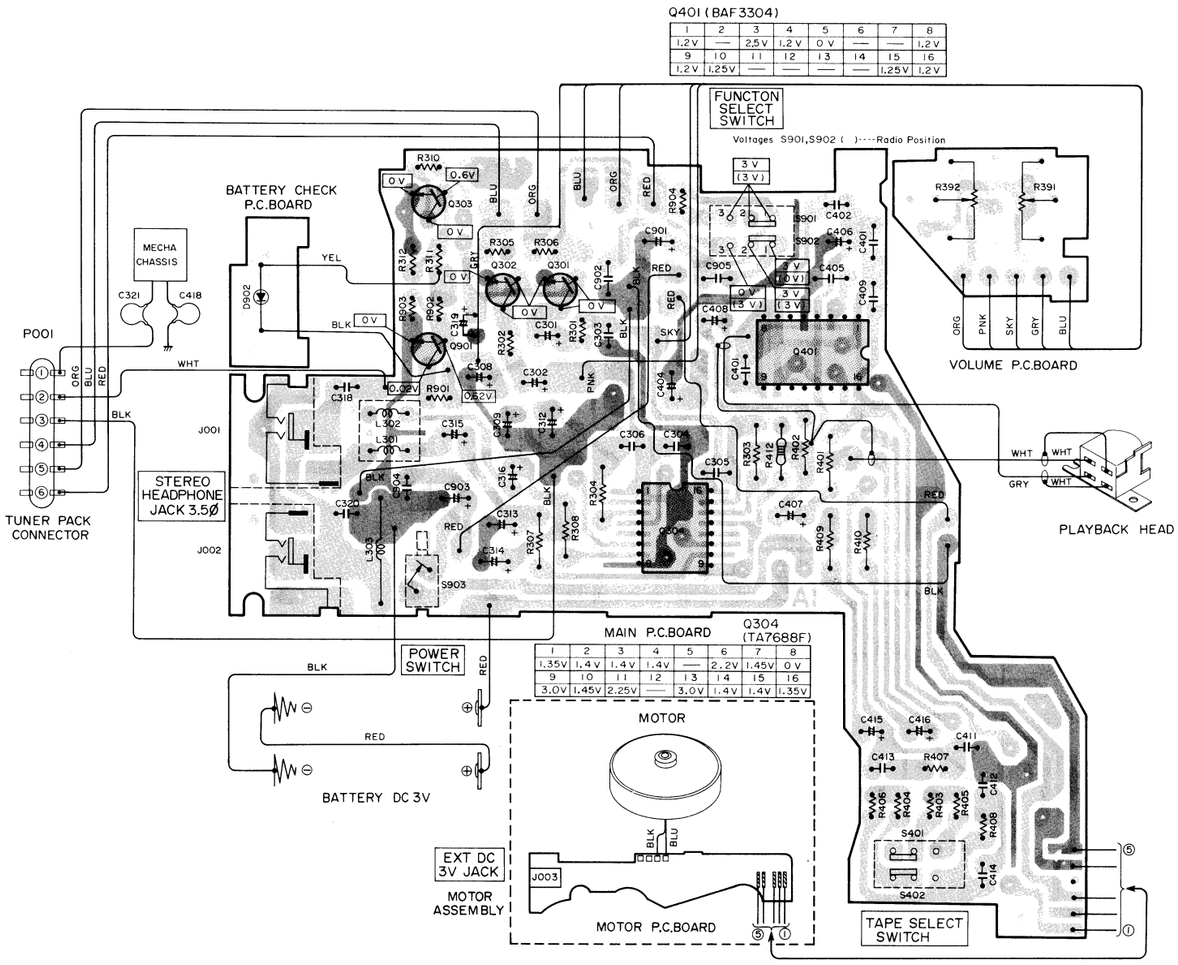
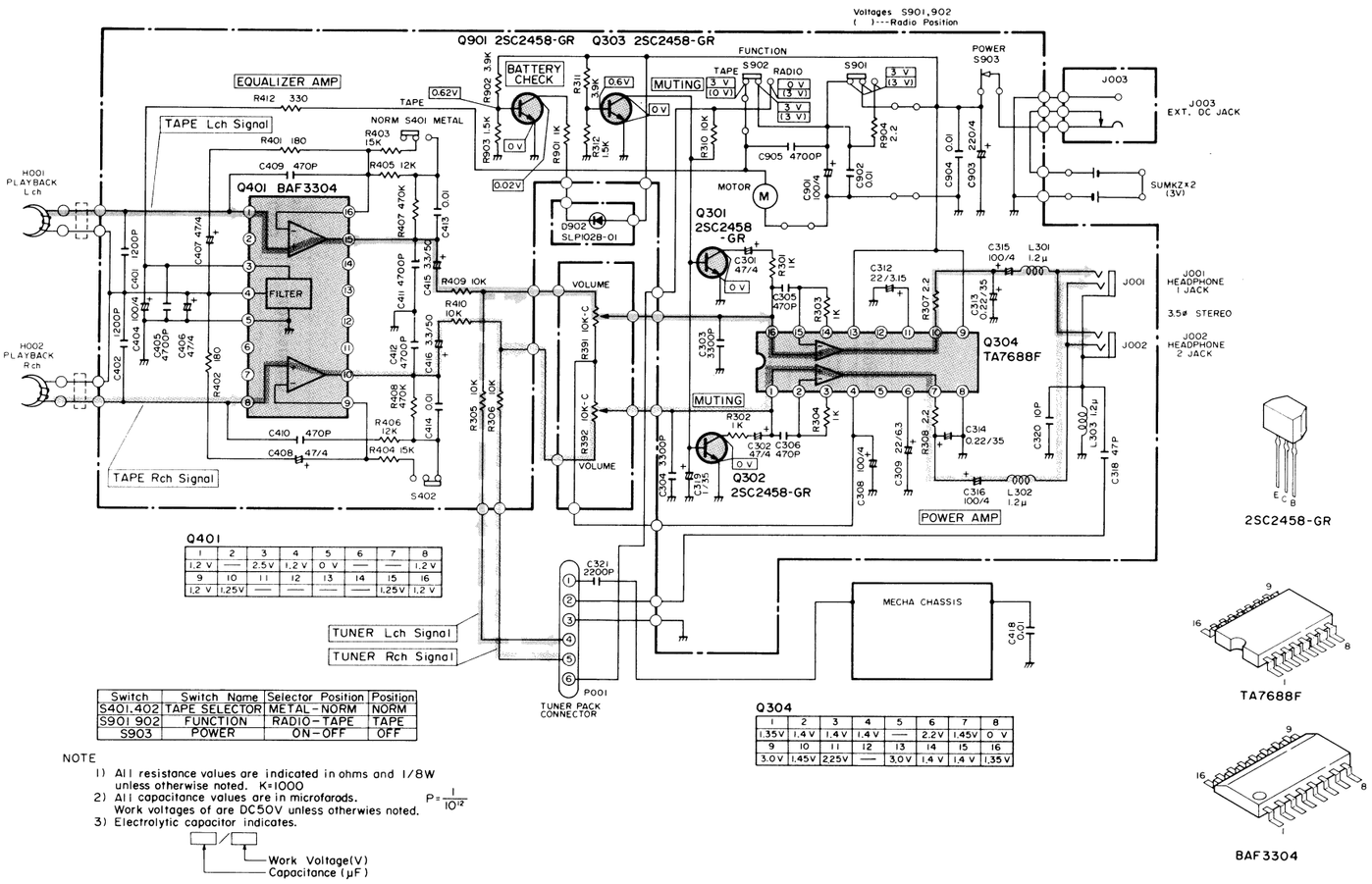


Figure 25

7-1. SCHEMATIC DIAGRAM

– CASSETTE PLAYER SECTION –



Q401

1	2	3	4	5	6	7	8
1.2 V	—	2.5V	1.2 V	0 V	—	—	1.2 V
9	10	11	12	13	14	15	16
1.2 V	1.25V	—	—	—	—	1.25V	1.2 V

Q304

1	2	3	4	5	6	7	8
1.35V	1.4 V	1.4 V	1.4 V	—	2.2V	1.45V	0 V
9	10	11	12	13	14	15	16
3.0 V	1.45V	2.25V	—	3.0V	1.4 V	1.4 V	1.35V

Switch	Switch Name	Selector Position	Position
S401,402	TAPE SELECTOR	METAL-NORM	NORM
S901 902	FUNCTION	RADIO-TAPE	TAPE
S903	POWER	ON-OFF	OFF

NOTE

1) All resistance values are indicated in ohms and 1/8W unless otherwise noted. K=1000
2) All capacitance values are in microfarads. $P=\frac{1}{10^{12}}$
   Work voltages of are DC50V unless otherwies noted.
3) Electrolytic capacitor indicates.

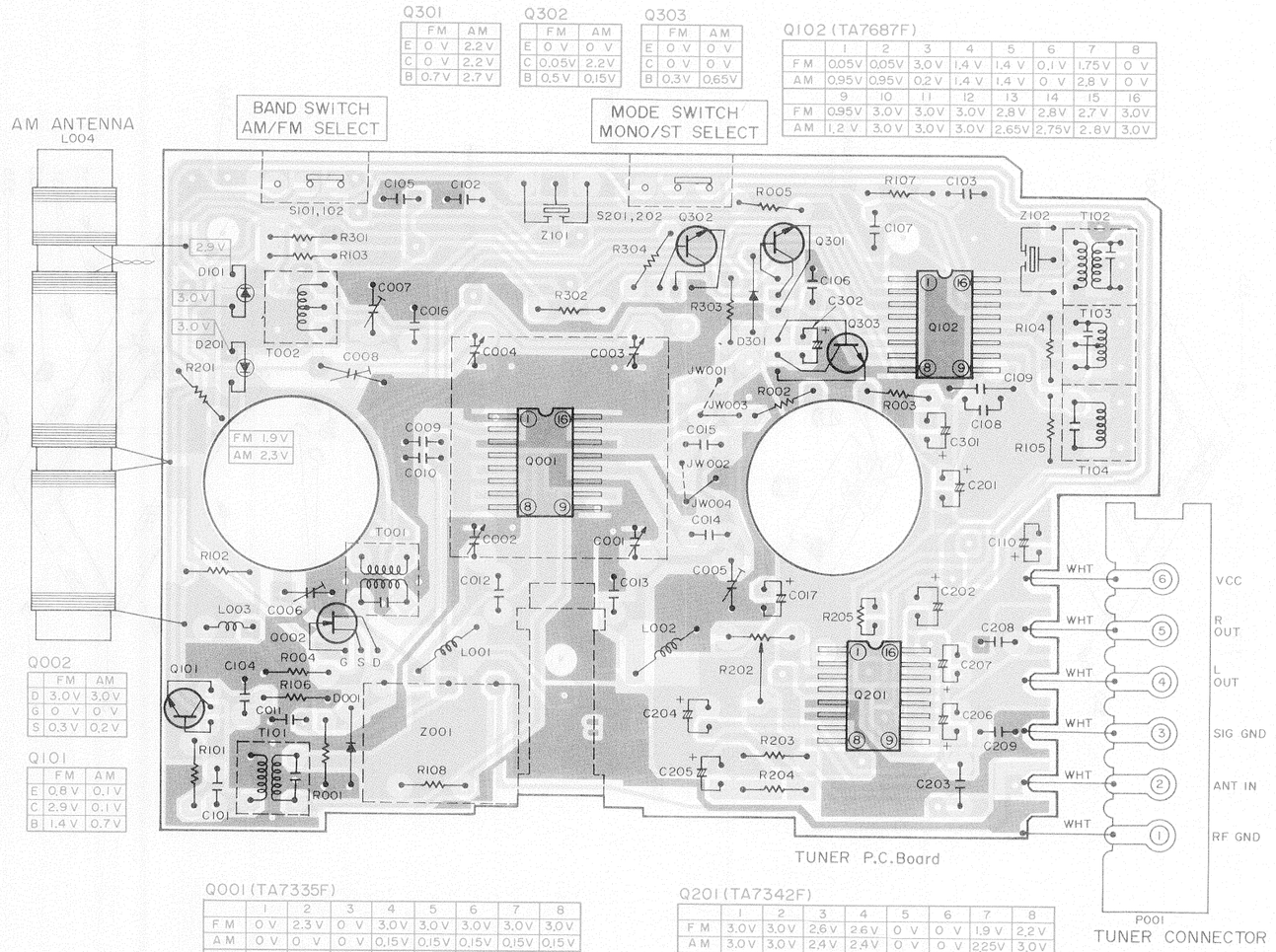
Work Voltage(V)
Capacitance (μF)

Figure 26

KT-VS1

6-2. ELECTRICAL PARTS LOCATIONS

— TUNER PACK SECTION —



Q301

	FM	AM
E	0 V	2.2 V
C	0 V	2.2 V
B	0.7 V	2.7 V

Q302

	FM	AM
E	0 V	0 V
C	0.05V	2.2V
B	0.5 V	0.15V

Q303

	FM	AM
E	0 V	0 V
C	0 V	0 V
B	0.3V	0.65V

Q102 (TA7687F)

	1	2	3	4	5	6	7	8
FM	0.05V	0.05V	3.0V	1.4 V	1.4 V	0.1 V	1.75 V	0 V
AM	0.95V	0.95V	0.2 V	1.4 V	1.4 V	0 V	2.8 V	0 V
	9	10	11	12	13	14	15	16
FM	0.95V	3.0V	3.0V	3.0V	2.8V	2.8V	2.7 V	3.0V
AM	1.2 V	3.0 V	3.0V	3.0V	2.65V	2.75V	2.8 V	3.0V

Q002

	FM	AM
D	3.0V	3.0V
G	0 V	0 V
S	0.3 V	0.2 V

Q101

	FM	AM
E	0.8 V	0.1 V
C	2.9 V	0.1 V
B	1.4 V	0.7 V

Q001 (TA7335F)

	1	2	3	4	5	6	7	8
FM	0 V	2.3 V	0 V	3.0 V	3.0 V	3.0 V	3.0 V	3.0 V
AM	0 V	0 V	0 V	0.15 V	0.15 V	0.15 V	0.15 V	0.15 V
	9	10	11	12	13	14	15	16
FM	0 V	3.0 V	0 V	2.8 V	0.4 V	0 V	1.4 V	0 V
AM	0 V	0.15 V	0 V	0.15 V	0.4 V	0 V	1.35 V	0 V

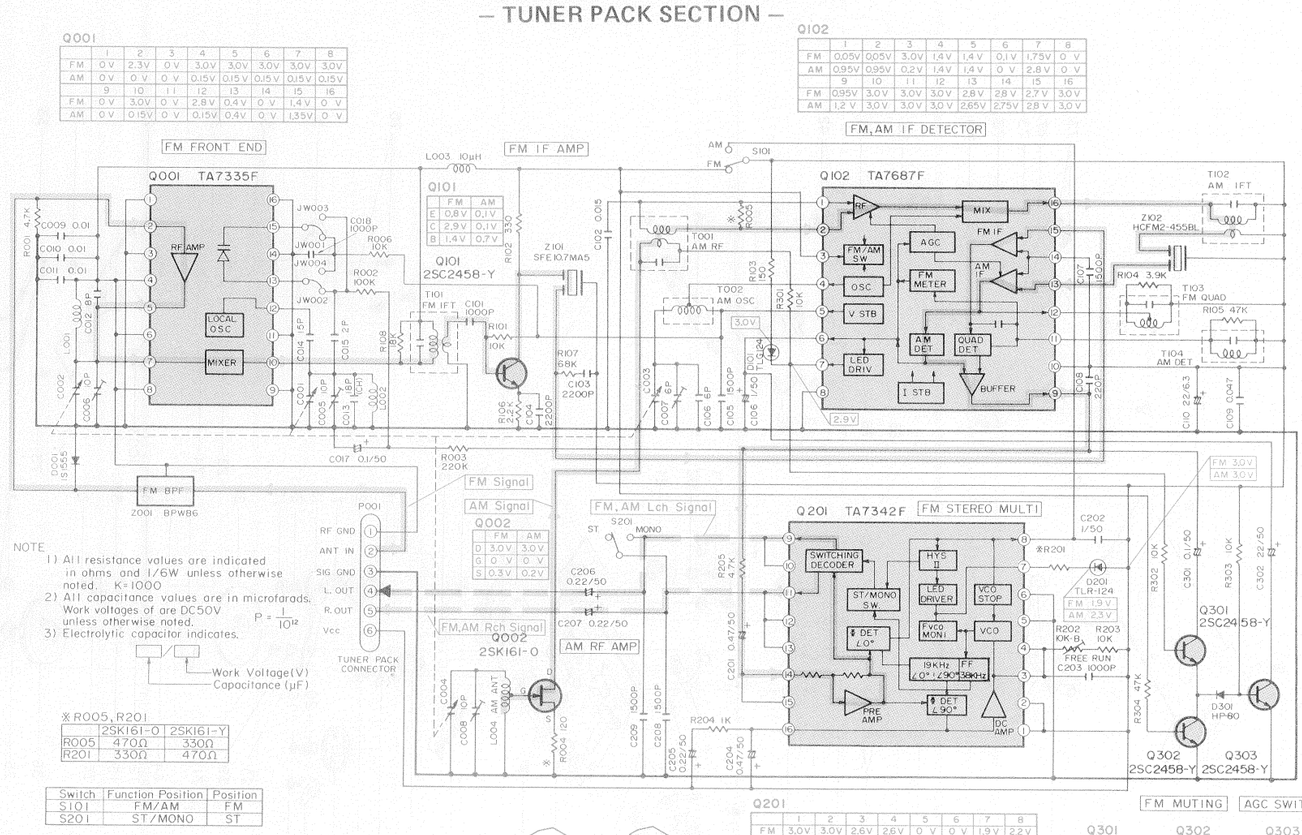
Q201 (TA7342F)

	1	2	3	4	5	6	7	8
FM	3.0V	3.0V	2.6V	2.6V	0 V	0 V	1.9 V	2.2 V
AM	3.0V	3.0V	2.4V	2.4V	0 V	0 V	2.25V	3.0 V
	9	10	11	12	13	14	15	16
FM	0.9 V	0.9 V	0.9 V	0.9 V	0.9 V	0.6 V	0.6 V	2.2 V
AM	0.9 V	0.9 V	0.9 V	0.9 V	0.9 V	0.6 V	0.6 V	2.2 V

Figure 27

7-2. SCHEMATIC DIAGRAM

— TUNER PACK SECTION —



■ CURRENT CONSUMPTION

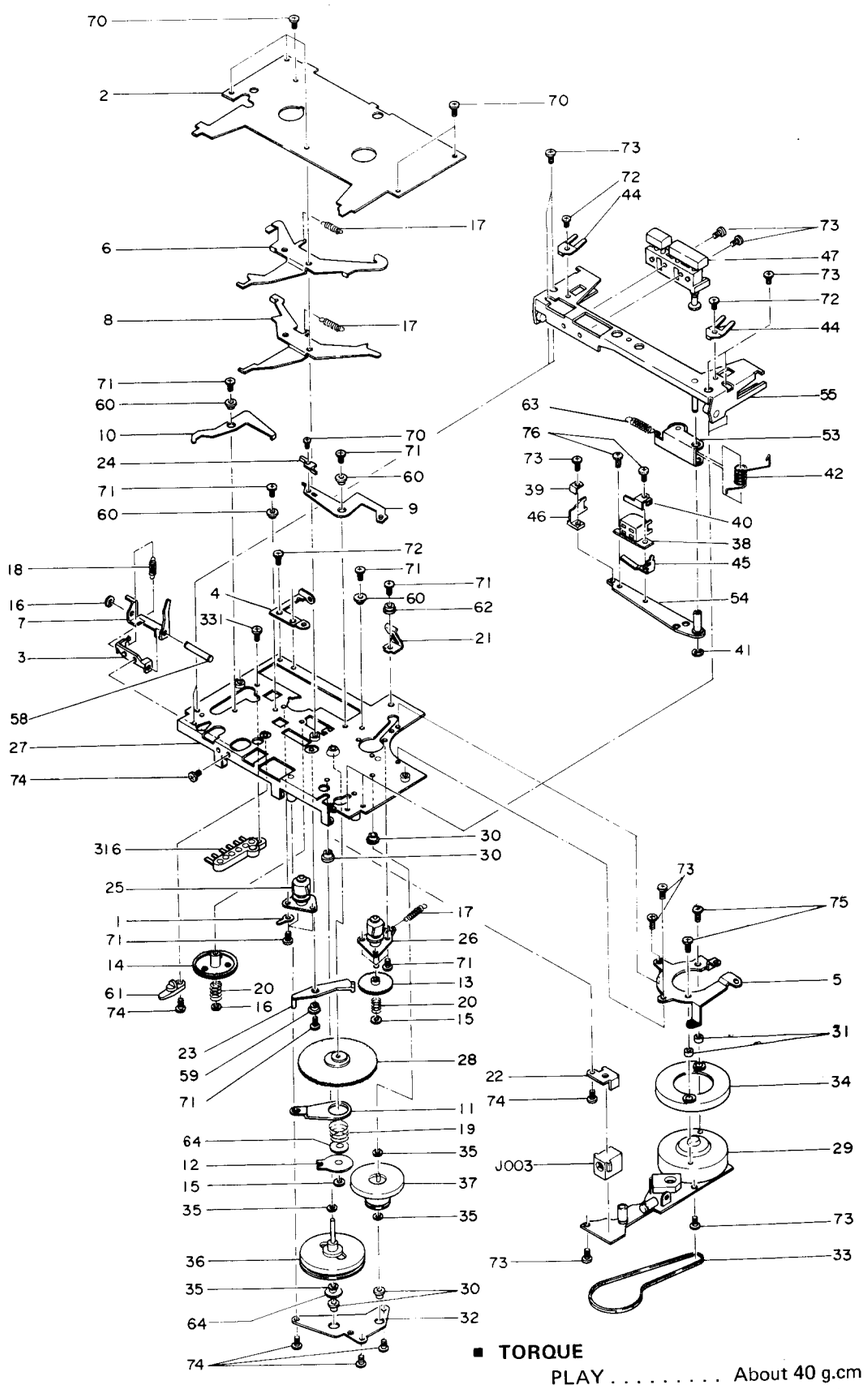
TAPE . . . . . 100mA (C-60 Take-up: Center, VOL: Min.)

FM . . . . . 37mA (STEREO, VOL: Min.)

AM . . . . . 28mA (VOL: Min.)

Figure 28

8. MECHANISM EXPLODED VIEW



■ **TORQUE**

PLAY . . . . . About 40 g.cm
FF . . . . . More than about 70 g.cm
REW. . . . . More than about 70 g.cm

Figure 29

9-1. CABINET EXPLODED VIEW

– CASSETTE PLAYER SECTION –

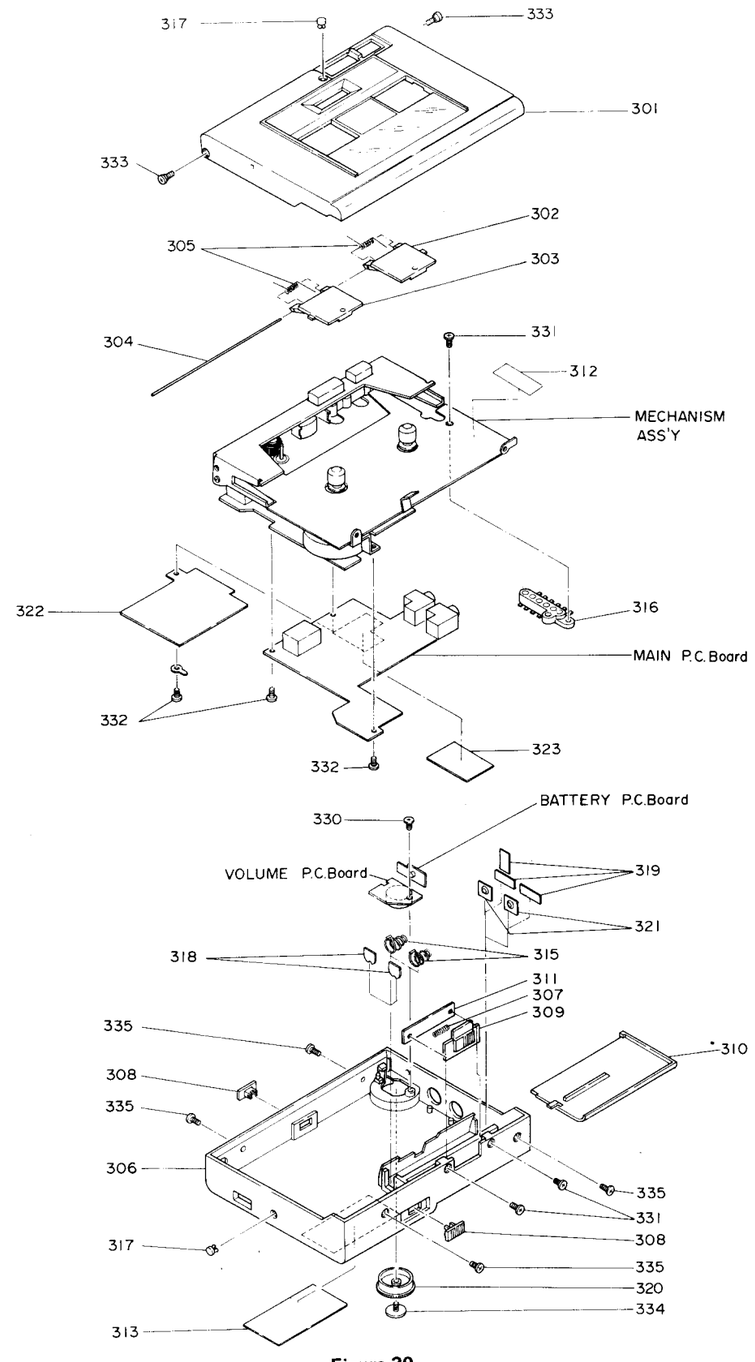


Figure 30

10-1. PARTS LIST

—CASSETTE PLAYER SECTION —

Symbol No.	Part No.	Description
MECHANISM PARTS		
2	25734467	Cover, Mechanism
3	25737001	Mounting, Play Lever
4	25737003	Mounting, Mechanism Cover
6	25748911	Lever, Lock
7	25748913	Lever, Play
8	25748914	Lever, Switch
9	25748915	Lever, Rewind
10	25748916	Lever, Stop
11	25754424	Lever, Frict
12	25754440	Washer
13	25756299	Gear, Rewind
14	25756300	Gear, Play
15	25766050	Washer
16	25766079	Washer
17	25776472	Spring
18	25776473	Spring, Play Lever Ass'y
19	25777178	Spring
20	25777130	Spring, Play Gear
21	25779270	Spring, Holder
22	25781253	Holder, Jack
23	25782540	Lever, ASO
24	25783296	Chip, Rewind Lever
25	25712421	Reel Plate Ass'y, L
26	25712422	Reel Plate Ass'y, R
27	25791456	Main Chassis Ass'y
28	25791503	Reel Ass'y, Take-up
29	22125815	Motor Ass'y, DC 3V with P.C. Board, Pulley
30	25725445	Holder
31	25726660	Spacer, Motor
33	25755538	Belt, Main
34	25761482	Cushion, Motor
35	25766082	Washer
36	25717529	Flywheel Ass'y
37	25717530	Sub Wheel Ass'y
38	22217404	Play Head
41	25735159	E Ring
42	25775239	Spring, Head Lever
44	25779268	Spring, Cassette Holder
45	25779271	Spring, Azimuth
46	25783282	Tape Guide
47	25716310	Button Ass'y
53	25717528	Pressure Lever Ass'y
55	25791457	Cassette Holder Ass'y
58	25722474	Pin, Play Lever
59	25726653	Boss, ASO Lever
60	25726655	Boss, Stop Lever

Symbol No.	Part No.	Description
61	25783289	Pin, Cassette Guide
62	25726654	Boss, Cassette Holder
63	25776474	Spring
64	25754442	Washer
70	22707495	Screw, 1.4ϕ x 1.6mm, FLT
71	22707496	Screw, 1.4ϕ x 2.5mm, PAN, BLK
72	22707830	Screw, 1.7ϕ x 1.6mm, PAN, BLK
73	22707831	Screw, 1.7ϕ x 2.5mm, PAN, BLK
74	22707832	Screw, 1.4ϕ x 2.5mm, PAN, BLK
75	22707882	Screw, 1.7ϕ x 3.5mm, PAN, BLK
76	22701467	Screw, 2ϕ x 3mm, BID
CABINET PARTS		
301	25881575	Cabinet Ass'y Front
302	25837867	Button, Rewind
303	25837882	Button, FF
304	25847271	Shaft, Button
305	25847272	Spring, Button
306	25881576	Cabinet Ass'y, Back
307	25777149	Spring, Lock
308	25837869	Knob, Slide Switch
309	25837870	Button, Lock
310	25838985	Cover, Battery
311	25846594	Holder, Button
312	22900142	Label, Caution, C-R2E
313	22900207	Name Label
315	25777150	Battery Spring
316	25781251	Connector
317	25832543	Cover, Azimuth
318	25833525	Spacer, Battery A
319	25833526	Spacer, Battery B
320	25837868	Knob, Volume
321	25847274	Battery Contact
323	25854509	Spacer, Lead
330	22707612	Screw, 1.4ϕ x 3mm, PAN FL, BLK
331	22707738	Screw, 1.4ϕ x 3mm, PAN, Chrome
332	22707831	Screw, 1.7ϕ x 2.5mm, PAN
333	22707850	Special Screw
334	22707851	Volume Decoration Screw
335	22707866	Screw, 1.7ϕ x 2.5mm, PAN, Chrome

Symbol No.	Part No.	Description
TRANSISTORS, ICS AND DIODES		
Q301, 302 303	A6332440	Transistor, 2SC2458-GR
Q304	B0356885	IC, TA7688F
Q401	22117064	IC, BAF3304
Q901	A6332440	Transistor, 2SC2458-GR
D901	22115782	Diode, SLP102B-01
ELECTRICAL PARTS		
L301, 302	22292153	Coil, RT-51-2153
L303	22291128	Coil
J001, 002	22163947	Jack, 3.5ϕ, Stereo Headphone
J003	22163936	Jack, DC power (DC-3V)
S401, 402	22196056	Switch, Slide, Tape Select
S901, 902	22196056	Switch, Slide, Function Select
S903	22196089	Switch, Leaf, Power
CAPACITORS D = ±0.5pF, J = ±5%, K = ±10%, M = ±20% ABBREVIATIONS: CD = Ceramic Disk, EL = Electrolytic BL = Barrier Layer, TT = Tantalum		
C301, 302	22440518	EL, 47mfd, 4V
C303, 304	22360601	BL, 3300pF, 25V, M
C305, 306	22360362	CD, 470pF, 50V, K
C308	22440517	EL, 100mfd, 4V
C309	22440451	EL, 22mfd, 6.3V
C312	22490003	TT, 22mfd, 3.15V
C313, 314	22490035	TT, 0.22mfd, 35V
C315, 316	22440517	EL, 100mfd, 4V
C318	22360352	CD, 47pF, 50V, D
C319	22490033	TT, 1mfd, 10V
C320	22360359	CD, 10pF, 50V, D
C321	22360367	CD, 2200pF, 50V, K
C401, 402	22360621	BL, 1200pF, 25V, K
C404	22440517	EL, 100mfd, 4V
C405	22360325	BL, 4700pF, 25V, M
C406, 407 408	22440518	EL, 47mfd, 4V
C409, 410	22360362	CD, 470pF, 50V, K
C411, 412	22360573	BL, 4700pF, 25V, K
C413, 414	22360665	BL, 0.01mfd, 25V, J
C415, 416	22440442	EL, 3.3mfd, 50V
C418	22360344	BL, 0.01mfd, 25V, M
C901	22440517	EL, 100mfd, 4V
C902	22360344	BL, 0.01mfd, 25V, M

Symbol No.	Part No.	Description
C903	22440516	EL, 220mfd, 4V
C904	22360344	BL, 0.01mfd, 25V, M
C905	22360325	BL, 4700pF, 25V, M
RESISTORS G = ±2%, J = ±5% All resistors are carbon film, 1/8W unless otherwise noted.		
R301, 302	22550181	1K ohm, J
R303, 304	22540599	1K ohm, G
R305, 306	22550192	10K ohm, J
R307, 308	22540478	2.2 ohm, J
R310	22550192	10K ohm, J
R311	22550418	3.9K ohm, G
R312	22550415	1.5K ohm, G
R391, 392	22611404	10K ohm, Variable volume
R401, 402	22540595	180 ohm, G
R403, 404	22550194	15K ohm, J
R405, 406	22550407	12K ohm, G
R407, 408	22550213	470K ohm, J
R409, 410	22584103	10K ohm, 1/6W, J
R412	22584331	330 ohm, 1/6W, J
R901	22550181	1K ohm, J
R902	22550418	3.9K ohm, G
R903	22550415	1.5K ohm, G
R904	22550223	2.2 ohm, J

9-2. CABINET EXPLODED VIEW

— TUNER PACK SECTION —

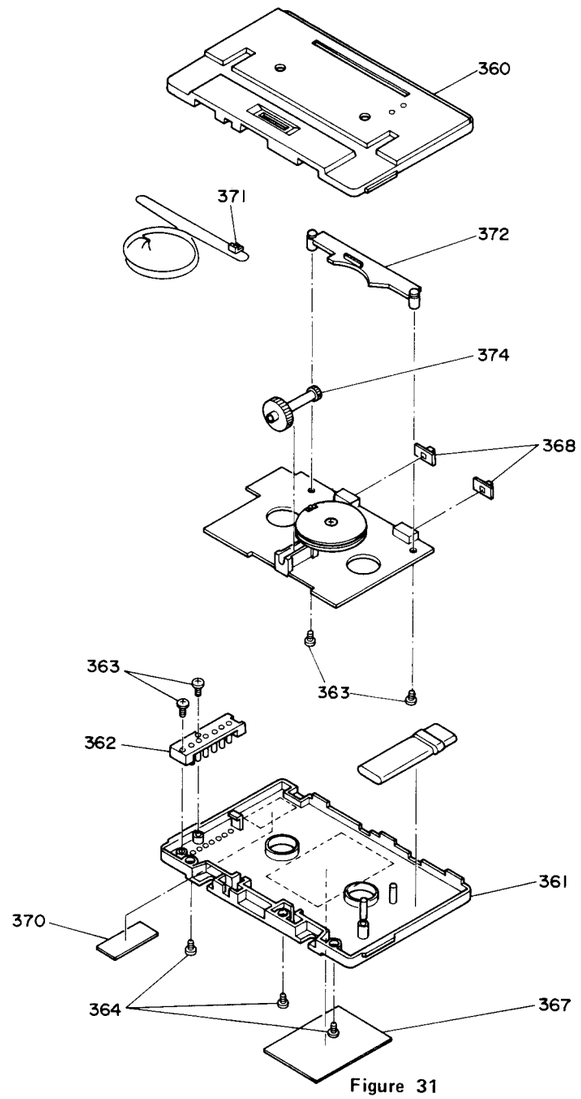


Figure 31

10-2. PARTS LIST — TUNER PACK SECTION —

Symbol No.	Part No.	Description
	CABINET PARTS	
360	22881179	Cabinet, Upper
361	22881165	Cabinet, Bottom
362	22161726	Connector, 6P
363	22707638	Screw, 1.7ϕ x 4.5mm, BID
364	22707662	Screw, Special, Tapping

Symbol No.	Part No.	Description
367	22866200	Name Label, (YY, AY)
367	22866201	Name Label, (TA, TC)
368	22884242	Knob, Cap
370	22900142	Label, Caution, C-R2-E
371	22741393	Pointer
374	22824402	Knob, Tuning

Note: The Tuner Pack for "FY" is optional.

Symbol No.	Part No.	Description
	TRANSISTORS ICS AND DIODES	
Q001	B0325275	IC, TA7335F
Q002	A6042620	Transistor, FET, 2SK161-O
Q101	A6332430	Transistor, 2SC2458-Y
Q102	B0356875	IC, TA7687F
Q201	B0325335	IC, TA7342F
Q301, 302 303	A6332430	Transistor, 2SC2458-Y
D001	A7246703	Diode, 1S1555V
D101	A8606201	Diode, LED, TLG-124A
D201	A8601150	Diode, LED, TLR-124A
D301	22115677	Diode, D-HP-80-L
	ELECTRICAL PARTS	
L001	22295141	Coil, LH010-5.5T
L002	22295142	Coil, LH010-4.5T
L003	22241065	Coil, CH100
L004	22242918	Coil, AM Antenna
T001	22264864	IF Transformer, AM, RF
T002	22245414	Coil, AM, Oscillator
T101	22265837	IF Transformer, FM
T102	22264865	IF Transformer, AM
T103	22267419	IF Transformer, FM, QUAD
T104	22266388	IF Transformer, AM Detector
Z001	22153222	Filter, FM, Band-Pass
Z101	22153067	Filter, Ceramic, FM, 10.7 MHz
Z102	22153220	Filter, Ceramic, AM, TER-455BL
S101 ∿ 102	22196060	Switch, AM, FM
S201 ∿ 202	22196060	Switch, Mono/Stereo Select
	CAPACITORS D = ±0.5pF, J = ±5%, K = ±10%, M = ±20% ABBREVIATIONS: CD = Ceramic Disk, EL = Electrolytic BL = Barrier Layer, PS = Polystyrene	
C001 ∿ 004	22308560	Poly Variable Capacitor
C005	22309191	Trimmer, 10pF
C006	22309191	Trimmer, 10pF
C007	22309190	Trimmer, 6pF
C008	22309159	Trimmer, 10pF
C009, 010 011	22360604	BL, 0.01mfd, 25V, M
C012	22361180	CD, 18pF, 50V, J
C013	22360133	CD, 18pF, 50V, J
C014	22361150	CD, 15pF, 50V, J
C015	22361209	CD, 2pF, 50V, D
C016	22361609	CD, 6pF, 50V, D
C017	22440439	EL, 0.1mfd, 50V
C018	22349102	CD, 1000pF, 50V, K

Symbol No.	Part No.	Description
C101	22349102	CD, 1000pF, 50V, K
C102	22360605	BL, 0.015mfd, 25V, M
C103, 104	22360323	BL, 2200pF, 25V, M
C105	22360605	BL, 0.015mfd, 25V, M
C106	22440272	EL, 1mfd, 50V
C107	22360605	BL, 0.015mfd, 25V, M
C108	22349221	CD, 220pF, 50V, K
C109	22360608	BL, 0.047mfd, 25V, M
C110	22440277	EL, 22mfd, 6.3V
C201	22440271	EL, 0.47mfd, 50V
C202	22440272	EL, 1mfd, 50V
C203	22380070	PS, 1000pF, 125V, J
C204	22440271	EL, 0.47mfd, 50V
C205, 206 207	22440320	EL, 0.22mfd, 50V
C208, 209	22360605	BL, 0.015mfd, 25V, M
C301	22440439	EL, 0.1mfd, 50V
C402	22440277	EL, 22mfd, 6.3V
	RESISTORS All resistors are carbon film, 1/6W, ±5% unless otherwise noted.	
R001	22584472	4.7K ohm
R002	22584104	100K ohm
R003	22584224	220K ohm
R004	22584121	120 ohm
R005	22584471	470 ohm, (2SK161-O)
R005	22584331	330 ohm, (2SK161-Y)
R006	22584103	10K ohm
R101	22584103	10K ohm
R102	22584331	330 ohm
R103	22584151	150 ohm
R104	22584392	3.9K ohm
R105	22584473	47K ohm
R106	22584222	2.2K ohm
R107	22584681	680 ohm
R108	22584183	18K ohm
R201	22584331	330 ohm, (2SK161-O)
R201	22584471	470 ohm, (2SK161-Y)
R202	22658654	10K ohm, B, Semi-fixed Variable Resistor
R203	22584103	10K ohm
R204	22584102	1K ohm
R205	22570402	4.7K ohm
R301, 302	22584103	10K ohm
R303	22584103	10K ohm (YY, AY)
R303	22584473	47K ohm (TA, TC)
R304	22584473	47K ohm

11-1. BATTERY PACK EXPLODED VIEW

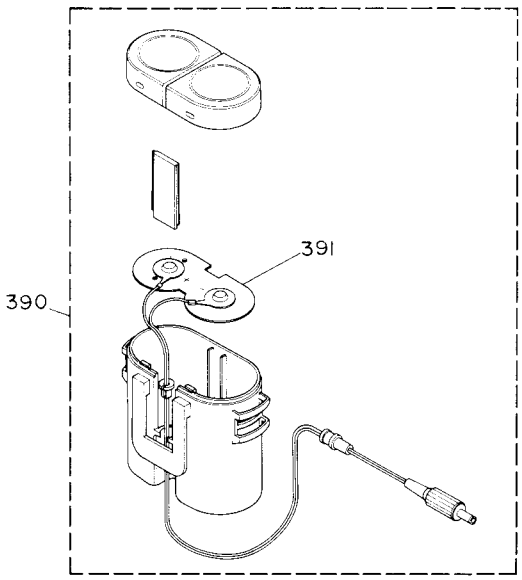


Figure 32

11-2. BATTERY PACK PARTS LIST

Symbol No.	Part No.	Description
390	25881500	Battery Pack
391	25881579	Cord Ass'y with Plug and Battery Contact

12-1. UNIT HOLDER EXPLODED VIEW

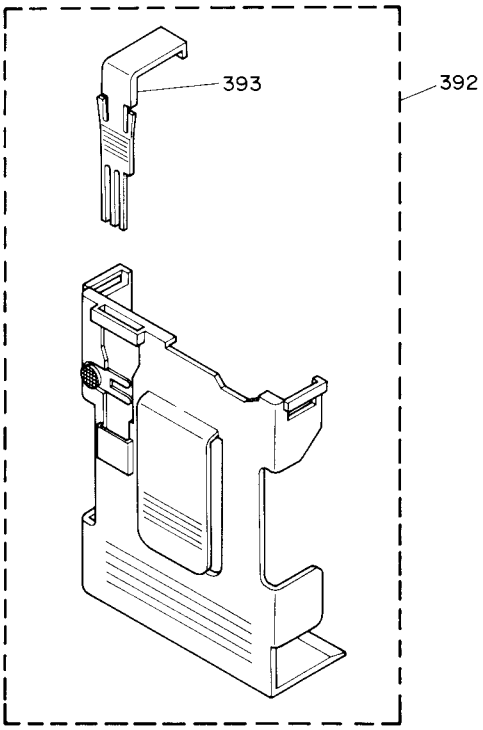


Figure 33

12-2. UNIT HOLDER PARTS LIST

Symbol No.	Part No.	Description
392	22991094	Unit Holder Ass'y
393	25835484	Holder Lever

13-1 HEADPHONE EXPLDED VIEW
–TA, TC, AY, YY–

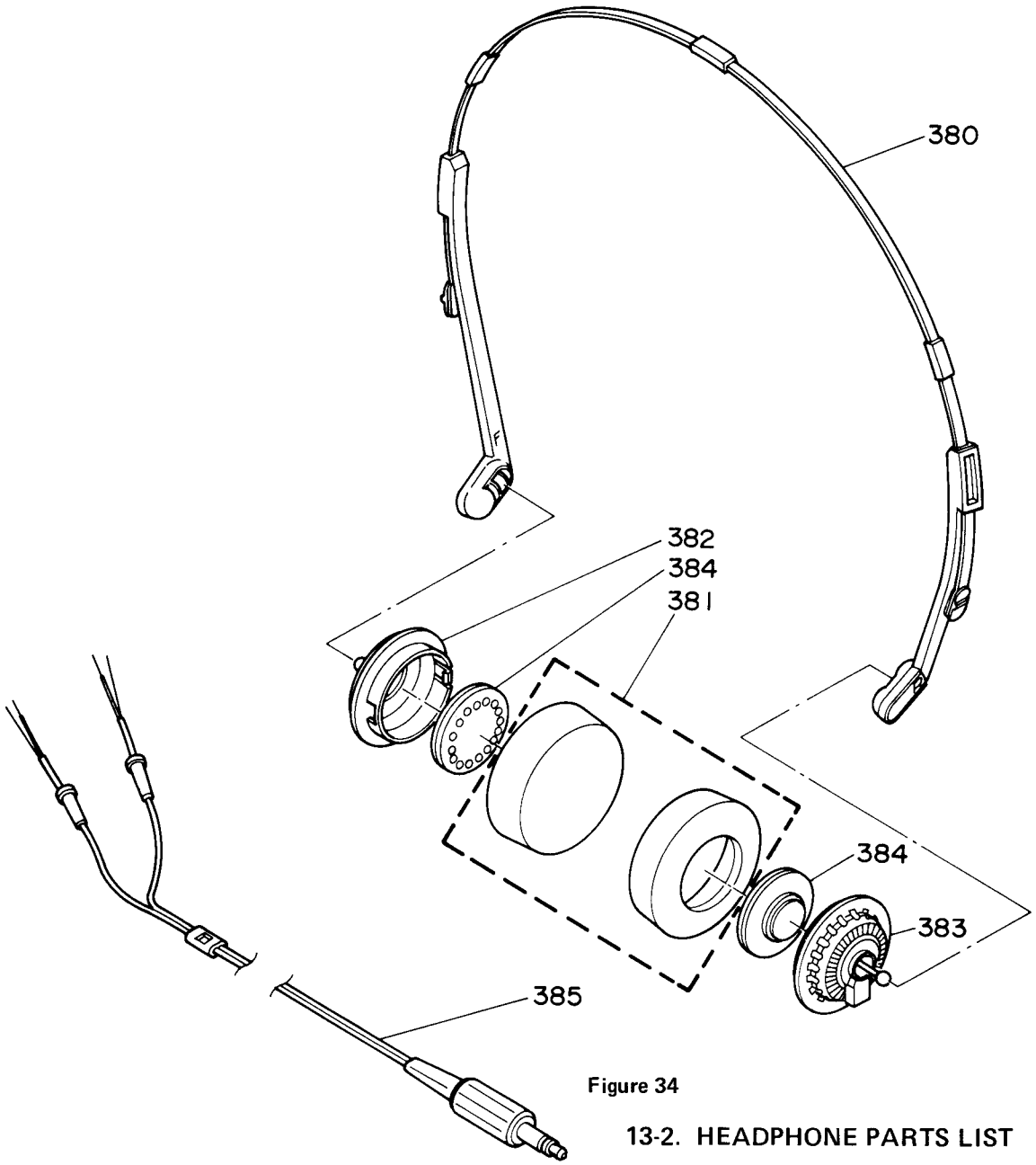


Figure 34

13-2. HEADPHONE PARTS LIST

Symbol No.	Part No.	Description
380	22810080	Head Band Ass'y, (TA, TC, YY, AY)
381	22810081	Ear Pad Ass'y, (TA, TC, YY, AY)
382	22810082	Housing, L, (TA, TC, YY, AY)
383	22810083	Housing, R, (TA, TC, YY, AY)
384	22810084	Driver, Unit, (TA, TC, YY, AY)
385	22810085	Cord Ass'y with Plug, (TA, TC, YY, AY)

13-3. HEADPHONE EXPLODED VIEW

—FY—

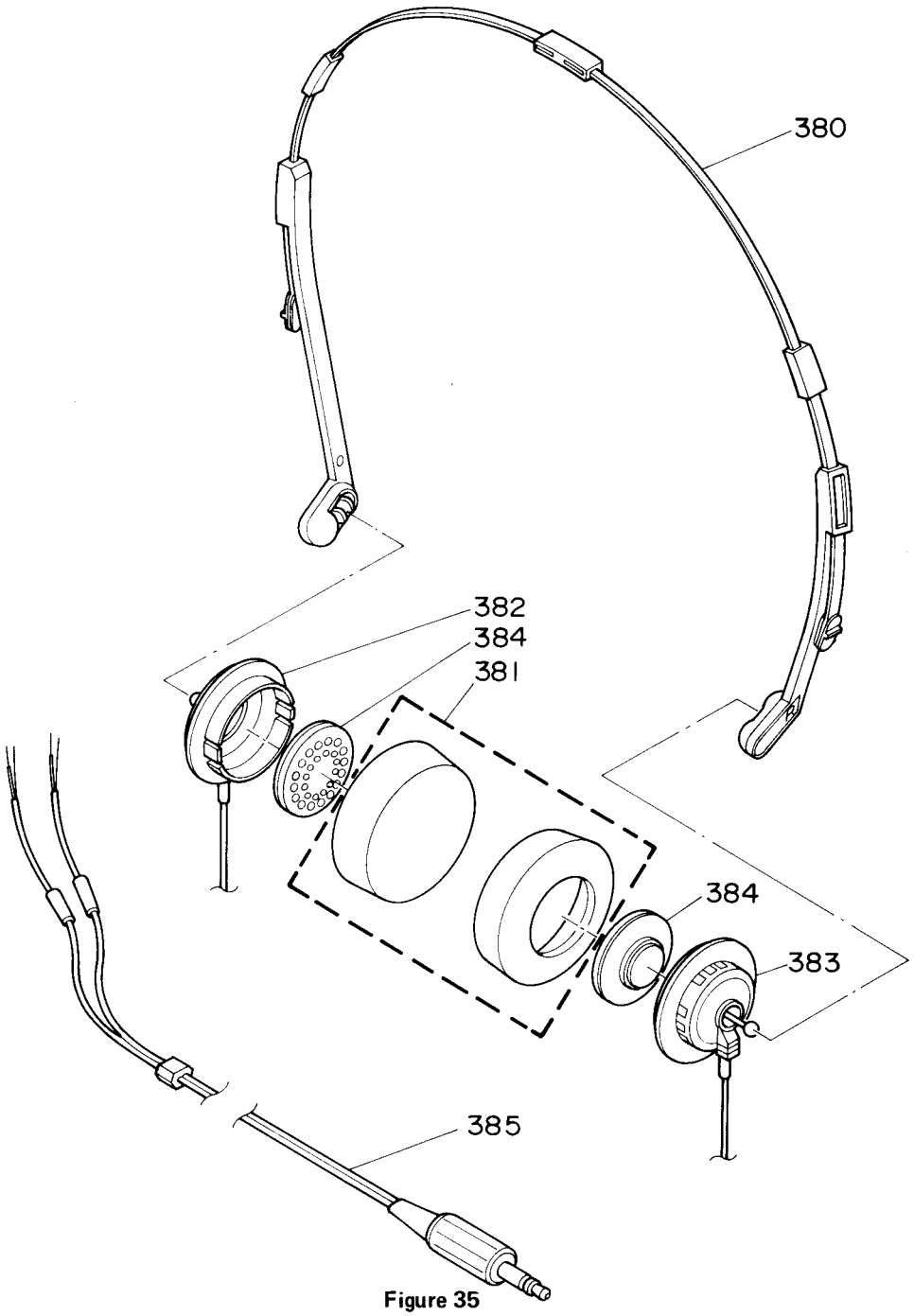


Figure 35

13-4. HEADPNONE PARTS LIST

Symbol No.	Part No.	Description
380	22810086	Head Band Ass'y, (FY)
381	22810087	Ear Pad Ass'y, (FY)
382	22810088	Housing, L, (FY)
383	22810089	Housing, R, (FY)
384	22810090	Driver Unit, (FY)
385	22810091	Cord Ass'y with Plug, (FY)

14. ACCESSORIES PARTS LIST

Symbol No.	Part No.	Description
AC01	22903424	Owner's Manual, (TA)
AC01	22903425	Owner's Manual, (TC)
AC01	22903426	Owner's Manual, (YY)
AC01	22903427	Owner's Manual, (AY)
AC01	22903428	Owner's Manual, (FY)
AC02	22991102	Belt

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